

Notice of Allowability

Application No.

10/724,055

Examiner

Dalzid Singh

Applicant(s)

OGUSU, MASAHIRO

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01 December 2003.
2. ☒ The allowed claim(s) is/are 1-4 which have been renumbered as 1-4 respectively.
3. ☒ The drawings filed on 01 December 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/511,095.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date Dec 01, 2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-4 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Claims 1-3 are allowable because the prior art of record, described in patent number 5,379,309 to Logan, Jr., does not teach or a two-optical signal generator comprising:

a first light source for generating a single-mode optical signal;

first optical modulation means for modulating the optical signal generated by said first light source according to an inputted signal, and outputting a modulated optical signal including predetermined specific two optical signals having a predetermined optical frequency difference;

a second light source for generating a multi-mode optical signal including predetermined two further optical signals having substantially the same wavelengths as those of the predetermined specific two optical signals of the modulated optical signal, respectively; and

optical injection means for optically injecting the modulated optical signal outputted from said first optical modulation means into said second light source, wherein the predetermined specific two optical signals of the modulated optical signal are injection-locked into the predetermined two further optical signals of the multi-mode optical signal, so that said second light source generates an injection-locked predetermined specific two optical signals.

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Claim 4 is allowable because the prior art of record, described in patent number 5,379,309 to Logan, Jr., does not teach or a two-optical signal generator comprising:

a first light source for generating a single-mode optical signal;

optical modulation means for modulating the optical signal generated by said first light source according to an inputted signal, and outputting a modulated optical signal including predetermined specific two optical signals having a predetermined optical frequency difference;

a second light source for generating a multi-mode optical signal including predetermined two further optical signals having substantially the same wavelengths as those of the predetermined specific two optical signals of the modulated optical signal, respectively, modulating the generated multi-mode optical signal according to an inputted data signal, and outputting a modulated multi-mode optical signal; and

optical injection means for optically injecting the modulated optical signal outputted from said optical modulation means into said second light source, wherein the predetermined two further optical signals of the modulated optical signal optically injected are injection-locked into the predetermined specific two optical signals of the multi-mode optical signal, and wherein the injection locking is turned on or off in accordance with a level of the data signal, thereby switching over whether or not said second light source generates the predetermined specific two optical signals.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272--3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DS
December 8, 2004


JASON CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600